

## **REMARKS**

In this Response, claims 26 and 35 are amended to correct certain informalities. No new matter has been added. Claims 26 and 33-38 are presented for examination.

### **Rejections Under 35 U.S.C. § 103**

In the Office Action claim 26 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Liu et al. (US2005/0058219) in view of Hasson et al. (US2003/0123566). This rejection is respectfully traversed and reconsideration is respectfully requested.

The Applicant notes that Liu has an earliest priority date of Sept. 16, 2003. Please find attached a declaration of the inventor given pursuant to 37 CFR 1.131 in order to swear behind Liu. This declaration shows that the invention was conceived at least as early as May 13, 2003, and that the inventor worked diligently to reduce the invention to practice from a time prior to at least Sept. 16, 2003 until the filing of the above-captioned application on December 15, 2003. Additionally, attached is Exhibit B indicating that Intel Corporation, the prior assignee of the present application, duly retained the services of the law firm of Eitan, Pearl, Latzer & Cohen Zedek, LLP (EPL&C) on or around July 14, 2003 after selecting the present invention for filing for patent protection. One of EPL&C's patent counsels drafted the subject patent application in the ordinary course of business, which eventually led to the filing on December 15, 2003, which is a reasonably diligent period for preparing the present application. Accordingly, the Applicant respectfully requests that Liu be removed as a basis for this rejection and that the Examiner withdraw the rejection to these claims.

In the Office Action claims 26 and 33-38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Liu and Hasson, and further in view of Vilcocq et al (US 2004/0041638).

For at least the reasons discussed above, the Applicant respectfully requests that Liu be removed as a basis for this rejection and that the Examiner withdraw the rejection to these claims.

Additionally, the Applicant notes that irrespective of Liu's status as a valid reference, the combination still fails to teach or suggest the required feature of claim 35-

38. Claim 35 is directed to a communication device that includes, among other features, *optimization criteria that includes a mean squared error of an input to said pre-emphasis filter and an input to a voltage controlled oscillator of a fractional-N phase locked loop unit.* The Examiner alleges that Vilcocq's pre-accentuation filter 18 corresponds to the recited pre-emphasis filter. The Examiner acknowledges that the transfer function of Vilcocq's pre-accentuation filter 18 is determined based on a mean-square error of an input to the pre-accentuation filter 18 and an output to a voltage controlled oscillator 13. The Examiner then alleges that it would be obvious to one skilled in the art that "optimization criteria of Vilcocq not only relate to the input of the voltage-controlled oscillator (i.e. output of the loop filter) but also relate to the input to the voltage-controlled oscillator because the output of the PLL includes the output to the VCO in addition to the input to the VCO." (office action, pages 4-5). The Applicant respectfully submits that the reasoning of the Examiner is not clear to the Applicant. Vilcocq clearly illustrates in Fig. 2 utilizing an output of the voltage controlled oscillator (VCO) 13 ( $S_{out}$ ) to generate the alleged optimization criteria. Although the output of Vilcocq's VCO 13 is obtained by passing an input through the VCO 13, as would be readily understood by someone skilled in the art, the input and the output of the VCO 13 are totally different signals.

Although Hasson discloses utilizing a dipole antenna, an amplifier coupled to the antenna, and a modulator coupled to the amplifier, Hasson is silent with regard to utilizing an input to a voltage controlled oscillator of a fractional-N phase locked loop unit to achieve the recited optimization criteria.

The Supreme Court has recently held that while determining obviousness for a §103 rejection, it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements" in the prior art to achieve the claimed invention and such a reasoning should be made explicit. *KSR Int'l Co. v. Teleflex, Inc.*, No 04-1350 (U.S. Apr. 30, 2007). The Examiner has not identified any motivation, suggestion, or reason in Vilcocq, Liu, or Hasson (or any other references) that would have prompted one skilled in the art to use the input to the VCO 13 (instead of its output, as disclosed by Vilcocq) to perform the alleged optimization. The rejection, thus, is based on impermissible hindsight reconstruction using the Applicant's

disclosure as a roadmap to achieve the claimed invention. Hence, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established.

For at least these reasons it is respectfully submitted that claim 35 is in condition for allowance.

Claim 36 is directed to a communication device that recites, among other features, *said optimization criteria are related to an input to said pre-emphasis filter and are related to an input to a voltage controlled oscillator of the fractional-N phase locked loop unit.* As discussed with respect to claim 35, Liu, Hasson, and Vilcocq, either alone or in combination, do not disclose, or even suggest, any optimization based on an input to a voltage controlled oscillator. For at least these reasons, claim 36 is in condition for allowance along with associated dependent claims 37 and 38, which recite additional novel features.

### **Conclusion**

For these reasons, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present paper, the Examiner is kindly requested to contact the undersigned at (503) 796-2084. If any fees are due in connection with filing this paper, the Commissioner is authorized to charge Deposit Account No. 500393.

Respectfully submitted,  
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